

Creation Weekend 2023

by
Margaret
Helder

It was like old times again! What a pleasure it was to hear our speaker, Dr. Gordon Wilson of New Saint Andrews College in Idaho, address us in person. And everyone appreciated the wonderful venue, Meadowlands Baptist Church, which provided excellent technical assistance as well as an attractive facility. The opportunity to chat with other people and to buy new book and DVD titles, were additional blessings.

On Friday evening October 27, Dr. Wilson introduced his keynote message *Young Earth Creation with Confidence and Grace*. Preliminary to the discussion, Dr. Wilson remarked that our modern culture is so permeated with old earth views, that any other position may strike hearers as patently ridiculous.

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Little Water Bears

"Strange is this little creature, because the whole organisation of his body is extraordinary and strange and because his external appearance, at the first sight, has the closest similarity to a little bear. This also led me to give him the name little water bear" (cited in Greven 2015).

That's what German pastor Johann August Ephraim Goeze said in his description of the tardigrade in 1773—what he called "kleinen Wasserbär" (little water bears) because of the way they walk. His description was included as a note in a translation he did of Charles Bonnet's

two-volume work *Traité d'Insectologie* from French to German. This translation work, done in agreement with Bonnet and at his suggestion, included many footnotes and some new literature. Goeze encouraged others to study their own local ecology as well in this work, saying, "each place has its physical advantages, and in each place, nature has something special in any of its realms. Location, climate, wood, mountains, waters, and

the like, require this diversity." He clearly appreciated God's creation and the complexity of His design in ecosystems (Greven).

Goeze's was the first scientific description of these tiny creatures. Within three years after publishing Herrn Karl Bonnets *Abhandlungen aus der Insektologie* (his translation of Bonnet's books), three other tardigrade descriptions were published. This was at a time when tardigrades were considered worms and worms were still considered insects. Since then, they have proven to be a source of fascination for scientists and non-scientists alike (Greven).

In 250 years since Goeze's original description, we've learned a lot more about their amazing characteristics and capabilities. Tardigrades are tiny—usually less than 0.5mm long—and mostly live in water films in or on mosses, lichens, and leaf litter. They are distributed globally in both aquatic and terrestrial environments. Tardigrades are multicellular organisms, but because they are so

small, adults only have about 1000 cells. They feed on algae, the branching filaments that make up the root-like mycelium of a fungus, or even small metazoans like rotifers and other tardigrades using mouthparts composed of a pair of stylets, a



mouth tube, and a muscular pharynx. The stylets are used to poke a hole in the membrane of a food organism and then suck the cellular fluids out.

Experiments have shown that tardigrades can survive extremely dry conditions, temperatures ranging from near absolute zero to above the

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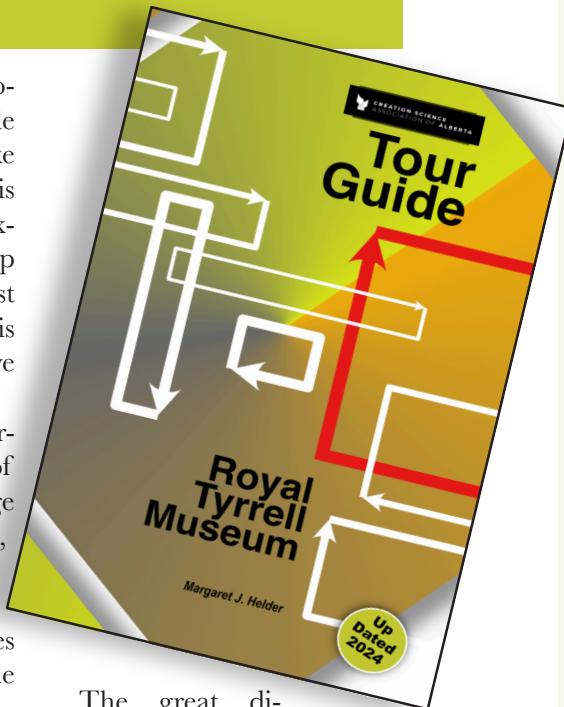
by
Andrea
Reitan

Royal Tyrrell Tour Guide... Coming Soon!

Since the early 1990s, CSAA has produced five editions of a Tour Guide to the Royal Tyrrell Museum. Unlike other guides to similar facilities, this guide includes discussion of most exhibits as they are encountered on a trip through the premises. The fifth and last edition was issued in 2014. It clearly is time for a new edition as there have been many changes since then.

Our guide typically begins with interpretive themes which apply to many of the exhibits. This feature will not change in the new edition. What has changed, is discussion of the preliminary exhibits which occupy about half the space available in the museum. The changes include displays up to the Burgess Shale on the mezzanine.

There were formerly many carnivorous dinosaur and marine reptile exhibits in this early section of the museum. Most of these have been removed to make space for interactive displays on the evidences for evolution, and similar exhibits. The new guide will provide critiques of these displays as well as discussion of new specimens now included.



The great dinosaur hall is for the moment largely unchanged from former years, so that section of the guide will be similar to former editions. The tour guide comes complete with an index which makes it user friendly for locating a discussion of a specific creature wherever it is located in the museum.

CSAA hopes to release the new edition in the spring in time for holiday visits to Drumheller. In the meantime we have free copies of the old edition available with notes to assist in navigating the current displays. Simply request one through our website. We also are compiling a list of people who want to be informed when the new guide is available.



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Landmark New Book on Apologetics and Science!

Review by
Margaret
Helder

Just-retired forensic scientist, Dr. Mark Sandercock, has written an amazing book on scripture, science and current attitudes and customs in our modern society and how these compare to biblical revelation. The book is written for all interested Christians, but especially for those who may have doubts about six-day creation and need a little encouragement.

This work is divided into three sections. The first deals with Genesis 1-11. The second section deals with the evolution paradigm and how this does not compare favourably with what we see in nature, or indeed in scripture. The third section deals with several popular practices which plague our society, and why these customs are allowed and encouraged today when former generations did not allow anything of the kind.

The author's position is that "if the Bible is true, and its claims about God, history, and our purpose are trustworthy, then the Bible is very relevant." (p. 10) and "Even though we may not be able to understand everything, God still has created us with intelligence and a desire to know. God expects us to study the world around us (Psalm 111:2; Proverbs 25:2)." (p. 13) Thus, the author discusses what the early chapters of Genesis declare, and how this sheds light on the physical creation and on the totality of the Gospel message.

The contents of this book are impressive indeed. The author has read and referenced an amazing number of publications. For example, he consults many theologians, ancient and modern. His conclusion to this section is that Genesis 1-11 sets the foundation for the Biblical narrative (creation and fall) and a promise of redemption. These chapters also point to a longing for the restoration of all things.

The second section examines key claims of modern authorities on evolution. The author soon establishes that none of these claims has any validity. He firstly considers a long running bacterial experiment which is supposed to demonstrate evolution in action. It doesn't. He next considers radiometric dating and the geological record. From there we go to evidences for a global flood (there is lots). He concludes this section with stories of popular scientific conclusions which later turned out to be wrong. He points out how attempts to harmonize the Bible with the Big

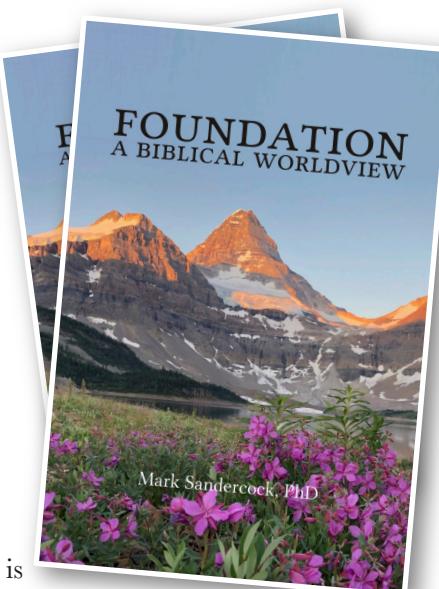
Bang and evolution, actually rewrite the entire Biblical account into unrecognizable form.

The last section deals with idols, here defined as modern values, beliefs and customs which many people elevate in their lives and objectives over the Word of God. Thus science, politics, wealth, and prestige etc. can all function as idols if an individual values these things above one's Christian faith. These idols include scientism, environmentalism and social practices which have become prevalent and popular in just the last few years. He firstly considers euthanasia. This section exhaustively considers the secular literature on each topic. The author provides alternative interpretations on these studies. For readers not closely interested in specific parts of these issues, they may prefer to move to the conclusions of each section such as pp. 284-289 under the heading Idolatry of the Will. The next section concludes with Idolatry of the Self (pp 338-342). Conclusion to the last section is Identity in Christ (pp. 417-422).

The author lastly discusses why we see such social disintegration (subtitle Consequences of a Self-created Identity pp.414-417). He declares that the objective of many today in education and elsewhere is to erase all memory of the past and replace it with new values and narratives which do not include religious faith of any kind. This is a very interesting interpretation of history that every concerned Christian should read. His conclusion about the consequences of such idols, ties the whole argument together. "True freedom is found in forgiveness through Christ and entering into a living relationship with our God, the Maker of heaven and earth."

Some people may feel reluctant to read such a big book. Of course, you don't have to read it all at once! For a start, dip into the sections that interest you the most. There is an index of Bible references which may encourage you to read one section or another first. The author writes in upbeat fashion, beginning each chapter with a personal vignette which definitely lures one on to read more! This is an important and exciting work which explains the message of Genesis 1-11 in winsome and clear fashion. Buy the book for your church or school library, your pastor or local politician, but especially for yourself!

Mark Sandercock. 2023. *Foundation: a Biblical Worldview*. Cavendish Laboratory Publication. 433 pp. Hardcover.



boiling point of water (-272°C to 151°C), radiation doses that are orders of magnitude higher than humans can withstand, incubation in organic solvents (alcohols), and exposure to the vacuum of space.

These amazing abilities are due to the way God engineered these tiny creatures to operate. As Goeze says, “Creator of elephants and atoms, of whales and the living water dots! I am amazed by the infinite diversity of designs your wisdom used to shape every body of the animal, the bird, the fish, the insect, and the worm in a different way!” (Greven). God has provided genes that enable them to continuously track their environment and respond or adapt to changes and stressful conditions. These include the following:

- ◆ Catalases: these are antioxidant enzymes that help to neutralize oxidative stress. Cells enduring stressful conditions often experience such oxidative stress. This is a major source of cell damage.
- ◆ DNA repair proteins: when tardigrades are dried out for long periods or exposed to high radiation doses, double-stranded breaks accumulate in their DNA. To recover from this, tardigrades have genes for DNA repair proteins, including one for translesion synthesis, which allows DNA to be replicated even when it is broken - a problem that would normally stall DNA copying.
- ◆ Polyamine synthesizing enzymes: Polyamines are small molecules that help protect membranes. One of these polyamines is spermidine, which is produced by an enzyme called spermidine synthase. One tardigrade genome (*Hypsibius dujardini*) was found to have 15 genes coding for this enzyme.
- ◆ Heat shock proteins: Heat shock proteins are molecular chaperones (a kind of molecule that helps other proteins fold properly). Tardigrades have numerous genes for these proteins, which respond to stresses such as desiccation, radiation exposure, and heat stress (Boothby, et al. 2015).

Some scientists believe tardigrades may have gained many of the genes that help them survive through horizontal gene transfer (HGT) (Boothby, et al.). This is when genes from one organism are passed to another unrelated organism. Prokaryotes (cells without organized nuclei) may do this through a process called conjugation, where two single-celled organisms link together with a tiny tube through which they pass genetic material. HGT has been used by evolutionists to explain how similar gene sequences can exist in very different species. There is no

known way that this HGT process could happen in eukaryotes (which contain an organized nucleus in every cell). Nevertheless, Darwinians use this proposed process to explain gene patterns which do not fit the expectations of common descent. When similar genes are observed in very different organisms, that situation is a big problem for evolutionary theory (Creation Science Association of Alberta 2023).

For example, the genome of *H. dujardini* contains many genes that are very similar to corresponding genes in fungi, plants, Archaea, and viruses. Some scientists think that tardigrades may be unusually susceptible to acquiring foreign DNA from their environment. Boothby, et al. speculate, “When desiccated membranes are rehydrated, they become transiently leaky, making the uptake of large macromolecules possible” though this does not explain how the DNA can be integrated into the tardigrade genome in a functional way (Boothby, et al. 2015), and that is the whole point: the HGT proposal is an attempt to rescue evolution.

Other scientists believe there may be contamination from other microbes that may have been mixed in with the tardigrades during preparation for the experiment. This is because the genome was found to be substantially longer and contained more “foreign” genes than expected. Due to the small size of tardigrades, isolating them and concentrating their DNA for analysis is a time-consuming and complicated process. The majority of HGTs are non-functional. For a foreign gene to become functional in a new organism, it must be integrated into its existing genome (Koutsovoulos, et al. 2016). Instead God probably designed tardigrades with these genes.

As the Almighty said: Let there be; when the earth, this drop in the bucket, ran out of his hand; then he also considered this little worm [the tardigrade], million times smaller than a grain of sand, worthy of being created, and maintained for six thousand years. With what intentions, as my eye has seen it this year perhaps for the first time? Lord! Who has been your advisor? From Him, and through Him, and to Him are all things - to Him be glory in the suns, in the clouds, in the seas, in the depths, in the visible and invisible world, in the behemoths, and in the little worm, that no eye has seen - to Him be the glory forever - **to Him be glory also in my heart.**

Pastor Johann August Ephraim Goeze, 1773 (emphasis his) (Greven) (See references page 7)



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It is in this cultural context he declared that we need to present our position in neither too defensive nor too aggressive a fashion, but “just right” with courage and empathy. Sometimes even church leaders, anxious to appear relevant and sophisticated, may refuse to question reigning evolutionary worldviews. It is easy enough for everyone to seek after prestige and popularity by supporting the secular worldview, but the issue of truth is not so easily pushed aside. These worldly philosophies may lead to a cultural train wreck such as we see in society today, while those impacted by this culture may not even perceive the problem.

Firstly then, Dr. Wilson discussed what the Scriptures say pertaining to the age of the earth (which is a key issue when the message of the early chapters of Genesis is concerned.) The clear message of Genesis 1-11 is that God made everything in the space of six days. This message is packaged in historical narrative, the method of communicating a factual account. This genre does not exclude the use of literary devices such as chiasms, parallelisms and poetry. Such inclusions however do not deny the historicity of the account.

Thus, Dr. Wilson discussed the use of the Hebrew term *yom* which means day. That term is apparently used in the Hebrew only in conjunction with small numbers, not anything like millions of years. So, accommodations which try to incorporate millions of years into the creation account, are not warranted. Dr. Wilson also discussed the genealogies presented in Genesis 5 and 11 which describe the passage of time in terms of a couple of thousands of years from Adam to Abraham. Dr. Wilson’s conclusion here is that trying to work evolutionary interpretations into the Biblical narrative, does not work.

Dr. Wilson next considered what science indicates about the age of the earth. Firstly, he addressed the issue of fossilization. This proceeds only when organisms, once dead, are buried quickly, permanently and deeply. If scavenger organisms can access the carcasses, then the remains will soon rot away, even bones. These requirements were met in the past by energetic water currents carrying

tremendous loads of sediment. That is why we do not see fossils forming today. Fossilization did not require millions of years and the great depths of sediment accumulated quickly, not over vast ages either. The flat surfaces of so many bedding planes in sedimentary rock also testify to the rapid process of depositing these sediments. If there were a considerable time interval between the laying down of each layer, there would be erosion on the surface and disturbance by organisms. There was no erosion or bioturbation of the strata (layers) in the Grand Canyon, for example. These came down boom, boom, boom – one on top of the other. The whole thing accumulated quickly, not over millions of years.

Dr. Wilson next discussed the unreliable nature of assumptions that scientists must adopt to calculate a radiometric date for a rock. Finally, he discussed recent discoveries of soft tissue in dinosaur bones. The known rates of organic decay mean that no biomolecules from dinosaurs could last for even a million years, let alone for 70 million years!

Having established that Scripture and science both testify to young ages, Dr. Wilson provided insights on how to communicate this message to others. Firstly we must be good listeners to what others have to say, he declared. Then we are encouraged to share, in winsome fashion, what we know.

The next morning Dr. Wilson looked in details at popular “pre-human” fossils which many people think prove human evolution. When each artifact is examined more closely, we see that none of them is transitional between humans and primates. In the afternoon Dr. Wilson presented *Alphabet Soup: can biological building blocks become a living cell?* With wonderful diagrams and some models (taken from children’s toys) Dr. Wilson delighted his audience with his critique of origin of life scenarios. Many people enjoyed this presentation the most, and so an inspiring series of presentations ended on an even higher note!



The Message of Dinosaur Relationships!

by
Moxie

Dinosaurs are such showy, dramatic creatures, and their fossils are found in such variety that they have naturally attracted a lot of attention from scientists and the public alike. The question “where did they come from?” has attracted a lot of attention from specialists who seek an evolutionary answer. Nevertheless, a recent article on the topic remarks that relationships (lines of evolutionary descent) between the major groups of dinosaurs have historically been uncertain. Why would that be? Have we seen any improvement in this situation with new analyses? [David Cerny and Ashley L. Simonoff. 2023. Statistical evaluation of character support reveals the instability of higher-level dinosaur phylogeny. *Nature* <https://doi.org/10.1038/s41598-023-35784-3> (2023) 13:9273 open access]

Comparison of dinosaur features by means of computer analysis (cladistics) has most recently been considered a reliable and unbiased way to figure out possible evolution-

ary relationships. This analysis involves comparison of individual characteristics or traits among certain organisms. All those which possess a given specialized trait are grouped together while the have-nots are placed in another group. For example, the meat eaters could be placed in one group, and the plant eaters in another group. Then another specialized feature is used further divide the already established clusters of organisms. And the process continues to smaller and smaller groupings.

There are three main groups of dinosaurs, the bird footed ornithischia [bird hipped plant eaters]; the huge sauropods with very long necks and tails [lizard hipped plant eaters] and the fast and frisky theropods [lizard hipped meat eaters]. No two groups exhibit the same combination of features. A traditional evolutionary interpretation, based on what some specialists thought might have happened in evolution, was the idea that the meat eating theropods appeared on earth about the same time as the

plant eaters which consisted of both the lizard hipped and bird hipped varieties. So, the two lines of descent were thought to be meat eaters versus plant eaters of whatever design.

In the 1980s as cladistic techniques took over evolutionary analysis, scientists adjusted the dinosaur groupings to bird hipped creatures, the ornithischia, versus lizard hipped dinosaurs of whatever design (sauropod and theropod). For the next thirty years after it was first proposed, this view remained current. But a new cladistic analysis appeared which turned everything upside down. It involved a large new dataset so that the hope was that it would be more reliable. This analysis in 2017 suggested a new system of dinosaur relationships. This pattern was “previously unforeseen” [p. 1] The new proposal involved the grouping of lizard hipped meat eating theropods and bird hipped plant eaters together versus the gigantic sauropods on their own line of descent (plant eating lizard hips).



As the above proposal didn't sound convincing, a new analysis was published within a few months. It took the dataset from the previous study and assigned different numerical values for the whole database. [The thing is that with large numbers of traits to be compared, scientists assign numerical values to these characteristics as this is the only way that computers can evaluate the relationships between the large numbers of different creatures.] From this computer analysis using the rescored data, the version of relationships popular for 30 years was again indicated. That view had clumped the lizard hips [saurod and theropod] in one line of descent vs the bird footed creatures with bird hips. So where does all this take us? Actually nowhere. Apparently, we cannot conclude anything about evolutionary relationships among the major groups of dinosaurs! A new article, open access, reviews the sorry situation.

The two scientists in the article listed above, set out to evaluate how much the data in each system deviated from the conclusions for each pattern of descent. Were there some data in each analysis that did not actually fit the conclusions? Yes, there were plenty of such contradictions, features that showed up in the wrong line of descent. The objective of this study was "Here we use statistical tools drawn from phylogenetics to

evaluate the relative support for the three hypotheses of large-scale dinosaur phylogeny [evolutionary relationships]." (p. 2) And the upshot was "Our results suggest that there are many more plausible hypotheses of early dinosaur phylogeny than usually recognized, and that selecting between them may be beyond the current characteristic matrices and techniques used to analyze them." (p. 2 emphasis mine)

"After much mathematical analysis, they conclude: "All three hypotheses of overall dinosaur phylogeny remain plausible, and neither data set shows any of these to be significantly better or worse than the alternative." (p. 8) There was no system that dealt adequately with the data: "in effect, the stronger phylogenetic signal present in the recoded and expanded matrix only served to amplify rather than eliminate, underlying conflict within the dataset." (p. 9 emphasis mine)

So, what did we learn? We cannot distinguish between of the current scenarios for dinosaur evolution. According to the creation account, this is what we would expect.

Startling realization: Such cladistic techniques which cannot discover obvious relationships among major dinosaur groups, are however used by scientists to support the idea that theropod dinosaurs developed into birds! Maybe it is time to critically

evaluate that idea too! Birds are clearly a separate creation.

Conclusion from scientific article cited above: "We conclude that early dinosaur relationships are unlikely to be resolved without fundamental changes to both the quality of available datasets and the techniques used to analyze them." [abstract]

Dinosaurs are a great argument against evolution and for design!! Cladistics does nothing to change that view.

***Little Water Bears* References from pg. 4**

Boothby, Thomas C. et al. 2015. "Evidence for extensive horizontal gene transfer from the draft genome of a tardigrade." Edited by W. Ford Doolittle. *PNAS* 112 (52): 15976-15981. doi:<https://doi.org/10.1073/pnas.1510461112>.

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2023. *Impact of Worldviews: Horizontal Gene Transfer (HGT)*. <https://headstart.create.ab.ca/term/horizontal-gene-transfer-hgt>.

Greven, Hartmut. 2015. "About the little water bear* A commented translation of GOEZE'S note „Ueber den kleinen Wasserbär“ from 1773." *Acta Biologica Benrodis* 17 (November 2015): 1-27. https://www.researchgate.net/publication/283615362_About_the_little_water_bear_A_commented_translation_of_GOEZE'S_note_Ueber_den_kleinen_Wasserbar_from_1773.

Koutsouvolos, Georgios et al. 2016. "No evidence for extensive horizontal gene transfer in the genome of the tardigrade *Hypsibius dujardini*." Edited by W. Ford Doolittle. *PNAS* 113 (18): 5053-5058. doi:<https://doi.org/10.1073/pnas.1600338113>.



Foundation: a Biblical Worldview

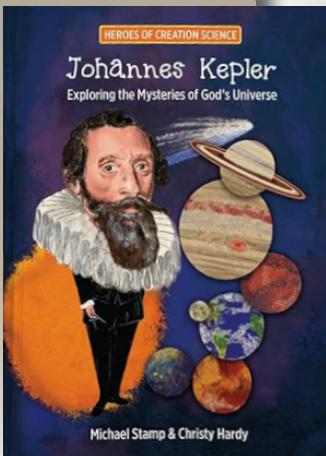
Mark Sandercock

This is a landmark book on apologetics which deals with scripture, science and the current cultural milieu which plagues our society. The book is written for all interested Christians but especially for those who wonder about the reliability of the early chapters in Genesis. Each section is interesting and beautifully documented. People concerned about social action and politics will be especially interested in the third section of this volume.

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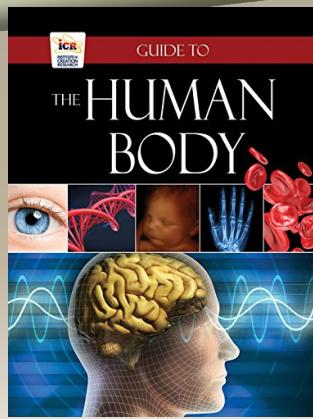
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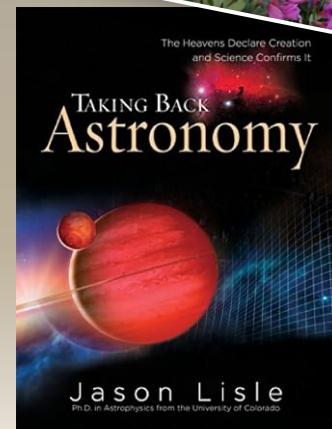
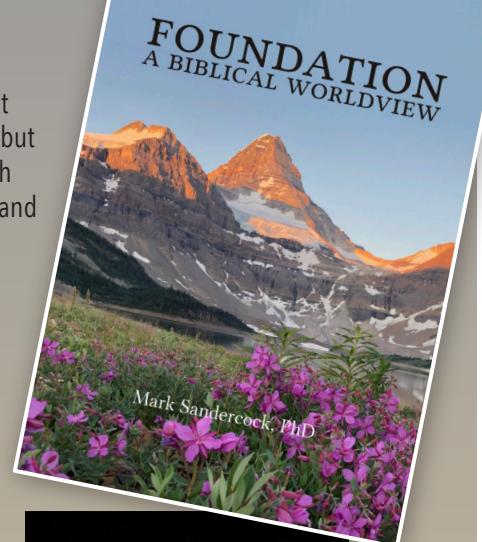
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